

WHAT IS CLAIMED IS:

1. A transition-isolating drive circuit for a synchronous
2 rectifier, comprising:

3 drive switches coupled to a transformer winding and configured
4 to provide drive signals for said synchronous rectifier; and

5 a conduction-inhibiting circuit, coupled to said drive
6 switches, that increases a turn-off voltage of said drive signals
7 to a predetermined level.

2. The circuit as recited in Claim 1 wherein said
2 conduction-inhibiting circuit comprises a component that produces
3 a reference voltage on which said predetermined level is based.

3. The circuit as recited in Claim 3 wherein said component
2 is a zener diode.

4. The circuit as recited in Claim 3 wherein said
2 conduction-inhibiting circuit further comprises a blocking diode
3 series-coupled to said component.

5. The circuit as recited in Claim 1 wherein said
2 conduction-inhibiting circuit comprises a zener diode associated
3 with each of said drive switches.

6. The circuit as recited in Claim 1 further comprising a
2 conduction-enhancing circuit, coupled to said drive switches, that
3 limits a turn-on voltage of said drive signals to a predetermined
4 level.

7. The circuit as recited in Claim 1 wherein said
2 transformer winding is a secondary winding and said circuit further
3 comprises isolation capacitors interposing said secondary winding
4 and said drive switches.

8. A method of providing drive signals to a synchronous
2 rectifier, comprising:
3 employing an input voltage from a transformer winding to
4 provide drive signals; and
5 increasing a turn-off voltage of said drive signals to a
6 predetermined level.

9. The method as recited in Claim 8 wherein said increasing
2 is carried out by a component that produces a reference voltage on
3 which said predetermined level is based.

10. The method as recited in Claim 9 wherein said component
2 is a zener diode.

11. The method as recited in Claim 9 wherein a blocking diode
2 is series-coupled to said component.

12. The method as recited in Claim 8 wherein said increasing
2 is carried out by a zener diode associated with each of said drive
3 switches.

13. The method as recited in Claim 8 further comprising
2 limiting a turn-on voltage of said drive signals to a predetermined
3 level.

14. The method as recited in Claim 8 wherein said transformer
2 winding is a secondary winding and said method further comprises
3 isolating said secondary winding and said drive switches.

15. A power converter, comprising:

a main power switch coupled to a DC voltage source;

a transformer coupled to said main power switch;

a synchronous rectifier coupled to said transformer that provides a converter output; and

a transition-isolating drive circuit for said synchronous rectifier, including:

drive switches coupled to a winding of said transformer and configured to provide drive signals for said synchronous rectifier, and

a conduction-inhibiting circuit, coupled to said drive switches, that increases a turn-off voltage of said drive signals to a predetermined level.

16. The power converter as recited in Claim 15 wherein said conduction-inhibiting circuit comprises a component that produces a reference voltage on which said predetermined level is based.

17. The power converter as recited in Claim 16 wherein said component is a zener diode.

18. The power converter as recited in Claim 16 wherein said conduction-inhibiting circuit further comprises a blocking diode series-coupled to said component.

19. The power converter as recited in Claim 15 wherein said
2 conduction-inhibiting circuit comprises a zener diode associated
3 with each of said drive switches.

20. The power converter as recited in Claim 15 further
2 comprising a conduction-enhancing circuit, coupled to said drive
3 switches, that limits a turn-on voltage of said drive signals to a
4 predetermined level.

21. The power converter as recited in Claim 15 wherein said
2 winding is a secondary winding and said circuit further comprises
3 isolation capacitors interposing said secondary winding and said
4 drive switches.